

Model 390

Slush Freezer

Operating Instructions

048693-M



Complete this page for quick reference when service is required:

Taylor Distributor: _____

Address: _____

Phone: _____

Service: _____

Parts: _____

Date of Installation: _____

Information found on the data label:

Model Number: _____

Serial Number: _____

Electrical Specs: Voltage _____ Cycle _____

Phase _____

Maximum Fuse Size: _____ A

Minimum Wire Ampacity: _____ A

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048693-M



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Taylor Company
750 N. Blackhawk Blvd.
Rockton, IL 61072

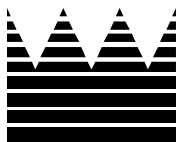


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Note: Continuing research results in steady improvements; therefore, information in this manual is subject to change without notice.

Notes:

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Section 1

To the Installer

This machine is designed for indoor use only.



DO NOT install the machine in an area where a water jet could be used. Failure to follow this instruction may result in serious electrical shock.

Water Connections (Water Cooled Units Only)

An adequate cold water supply must be provided with a hand shut-off valve. On the underside of the base pan, two 3/8" I.P.S. (for single-head units) or two 1/2" I.P.S. (for double-head units) water connections for inlet and outlet have been provided for easy hook-up. 1/2" inside diameter water lines should be connected to the machine. (Flexible lines are recommended, if local codes permit.) Depending on local water conditions, it may be advisable to install a water strainer to prevent foreign substances from clogging the automatic water valve. There will be only one water "in" and one water "out" connection. **DO NOT** install a hand shut-off valve on the water "out" line! Water should always flow in this order: first through the automatic water valve; second, through the condenser; and third, through the outlet fitting to an **open trap drain**.

Air Cooled Units

Air cooled units require a minimum of 6" (152 mm) of clearance around both sides and 0" at the rear of the freezer. This is required to allow for adequate air flow across the condenser(s). Failure to allow adequate clearance can reduce the refrigeration capacity of the freezer and possibly cause permanent damage to the compressor(s).

Electrical Connections

Each freezer requires one power supply. Check the data label on the freezer for fuse, circuit ampacity and electrical specifications. Refer to the wiring diagram provided inside of the electrical box, for proper power connections.

In the United States, this equipment is intended to be installed in accordance with the National Electrical Code (NEC), ANSI/NFPA 70-1987. The purpose of

the NEC code is the practical safeguarding of persons and property from hazards arising from the use of electricity. This code contains provisions considered necessary for safety. Compliance therewith and proper maintenance will result in an installation essentially free from hazard!

In all other areas of the world, equipment should be installed in accordance with the existing local codes. Please contact your local authorities.

Stationary appliances which are not equipped with a power cord and a plug or other device to disconnect the appliance from the power source must have an all-pole disconnecting device with a contact gap of at least 3 mm installed in the external installation.



CAUTION: THIS EQUIPMENT MUST BE PROPERLY GROUNDED! FAILURE TO DO SO CAN RESULT IN SEVERE PERSONAL INJURY FROM ELECTRICAL SHOCK!

Beater rotation must be clockwise as viewed looking into the freezing cylinder of the freezer.

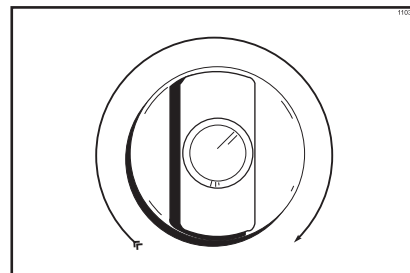


Figure 1



Note: The following procedures should be performed by a trained service technician.

To correct the rotation on a three-phase unit, interchange any two incoming power supply lines at the freezer main terminal block only.

To correct rotation on a single-phase unit, change the leads inside the beater motor. (Follow diagram printed on motor.)

Electrical connections are made directly to the terminal block. The terminal block is located in the control box located behind the left side panel.

Section 2

To the Operator

The slush freezer you have purchased has been carefully engineered and manufactured to give you dependable operation. The Taylor equipment, when properly operated and cared for, will produce a consistent quality product. Like all mechanical products, this machine will require cleaning and maintenance. A minimum amount of care and attention is necessary if the operating procedures outlined in this manual are followed closely.

This Operator's Manual should be read before operating or performing any maintenance on your equipment.

Your 380 Series model will NOT eventually compensate and correct for any errors during the set-up or filling operations. Thus, the initial assembly and priming procedures are of extreme importance. It is strongly recommended that all personnel responsible for the equipment's operation thoroughly read this manual.

If you require technical assistance, please contact your local authorized Taylor Distributor.



If the crossed out wheeled bin symbol is affixed to this product, it signifies that this product is compliant with the EU Directive as well as other similar legislation in effect after August 13, 2005. Therefore, it must be collected separately after its use is completed, and cannot be disposed as unsorted municipal waste.

The user is responsible for returning the product to the appropriate collection facility, as specified by your local code.

For additional information regarding applicable local laws, please contact the municipal facility and/or local distributor.

Compressor Warranty Disclaimer

The refrigeration compressor(s) on this machine are warranted for the term indicated on the warranty card accompanying this machine. However, due to the Montreal Protocol and the U.S. Clean Air Act Amendments of 1990, many new refrigerants are being tested and developed, thus seeking their way into the service industry. Some of these new refrigerants are being advertised as drop-in replacements for numerous applications. It should be noted that, in the event of ordinary service to this machine's refrigeration system, **only the refrigerant specified on the affixed data label should be used**. The unauthorized use of alternate refrigerants will void your compressor warranty. It will be the owner's responsibility to make this fact known to any technician he employs.

It should also be noted that Taylor does not warrant the refrigerant used in its equipment. For example, if the refrigerant is lost during the course of ordinary service to this machine, Taylor has no obligation to either supply or provide its replacement either at billable or unbillable terms. Taylor does have the obligation to recommend a suitable replacement if the original refrigerant is banned, obsoleted, or no longer available during the five year warranty of the compressor.

The Taylor Company will continue to monitor the industry and test new alternates as they are being developed. Should a new alternate prove, through our testing, that it would be accepted as a drop-in replacement, then the above disclaimer would become null and void. To find out the current status of an alternate refrigerant as it relates to your compressor warranty, call the local Taylor Distributor or the Taylor Factory. Be prepared to provide the Model/Serial Number of the unit in question.

Section 3

Safety

We at Taylor Company are concerned about the safety of the operator when he or she comes in contact with the freezer and its parts. Taylor has gone to extreme efforts to design and manufacture built-in safety features to protect both you and the service technician. As an example, warning labels have been attached to the freezer to further point out safety precautions to the operator.



IMPORTANT - Failure to adhere to the following safety precautions may result in severe personal injury. Failure to comply with these warnings may damage the machine and its components. Component damage will result in part replacement expense and service repair expense.

To Operate Safely:



DO NOT operate the freezer without reading this operator's manual. Failure to follow this instruction may result in equipment damage, poor freezer performance, health hazards, or personal injury.



- **DO NOT** operate the freezer unless it is properly grounded.
- **DO NOT** operate the freezer with larger fuses than specified on the freezer data label.
- **DO NOT** attempt any repairs unless the main power supply to the freezer has been disconnected.

Failure to follow these instructions may result in electrocution or damage to the machine. Contact your local authorized Taylor Distributor for service.



DO NOT use a water jet to clean or rinse the freezer. Failure to follow this instruction may result in serious electrical shock.



- **DO NOT** allow untrained personnel to operate this machine.
- **DO NOT** operate the freezer unless all service panels and access doors are restrained with screws.
- **DO NOT** remove the door, beater, scraper blades or drive shaft unless the control switch is in the "OFF" position.

Failure to follow these instructions may result in severe personal injury to fingers or hands from hazardous moving parts.



- **USE EXTREME CAUTION** when removing the beater assembly. The scraper blades are very sharp and may cause injury.
- **DO NOT** put objects or fingers in the door spout.

Failure to follow these instructions may result in contaminated product or personal injury from blade contact.



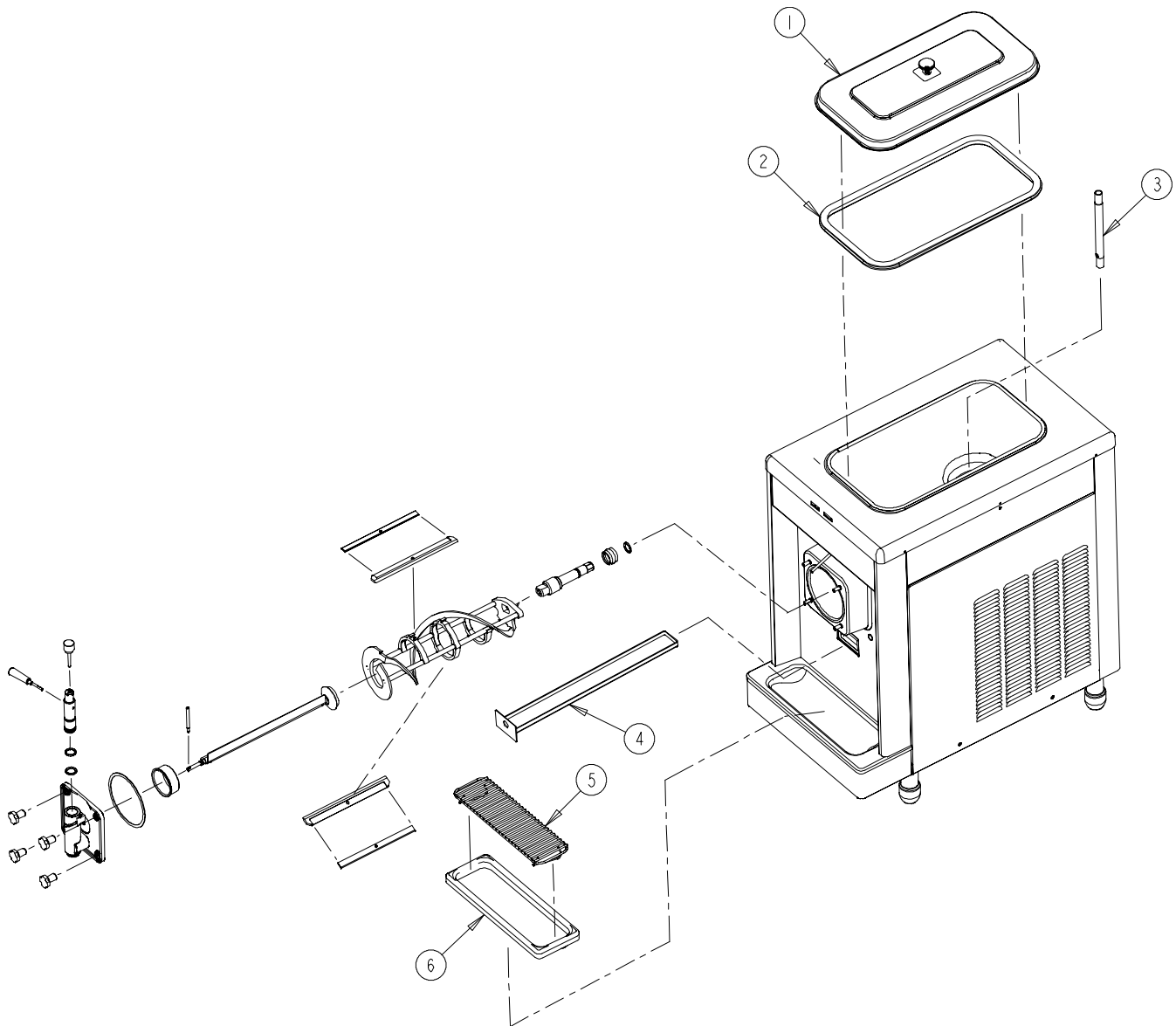
This freezer must be placed on a level surface. Failure to comply may result in personal injury or equipment damage.

DO NOT obstruct air intake and discharge openings: 6" (152 mm) minimum air space on both sides, and 0" at the rear of the freezer. Failure to follow this instruction may cause poor freezer performance and damage to the machine.

NOISE LEVEL: Airborne noise emission does not exceed 78 dB(A) when measured at a distance of 1.0 meter from the surface of the machine and at a height of 1.6 meters from the floor.

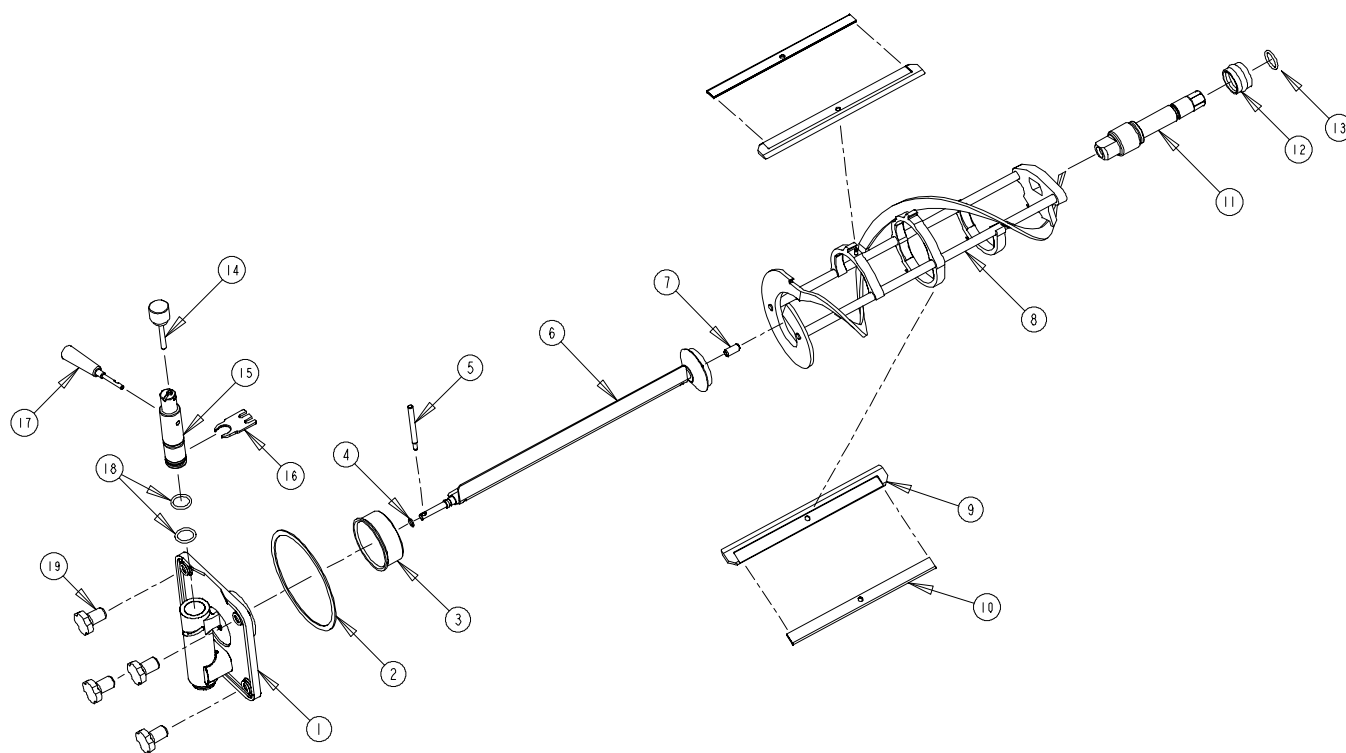
Section 4

Operator Parts Identification



Item	Description	Part Number
1	Hopper Cover	X38458
2	Gasket-Hopper Cover	038375
3	Feed Tube	015176-9
4	Drip Pan	035034
5	Splash Shield	046177
6	Drip Tray	046275

Beater Assembly



Item	Description	Part Number
1	Freezer Door	X47982
2	Gasket-Door	014030
3	Front Bearing	013116
4	O-Ring-Baffle	018550
5	Baffle Arm	047729
6	Baffle	X47731
7	Guide Bearing	014496
8	Beater	X46233
9	Scraper Blade	046237
10	Clip-Scraper Blade	046238

Item	Description	Part Number
11	Beater Shaft	036412
12	Seal-Beater Shaft	032560
13	O-Ring-Beater Shaft	025307
14	Valve Handle Pin	X25929
15	Draw Valve	047734
16	Ice Buster	047735
17	Draw Handle	X47384
18	O-Ring-Draw Valve (2)	032504
19	Stud Nut	029880

Section 5

Important: To the Operator

Control Switch

The center position is “OFF”. The “WASH” position activates the beater motor only. The “AUTO” position allows the beater motor and compressor to run.

Indicator Light - “Mix Low”

Located on the front of the machine is a mix level indicating light. When the light is flashing, it indicates that the mix hopper has a low supply of product and should be refilled as soon as possible. Neglecting to add mix when the light comes on will cause the machine to sway and may eventually cause damage to the beater assembly and freezer door.

Indicator Light - “Mix Out”

Also located on the front of the machine is a mix out indicating light. When the light is flashing, it indicates that the hopper is empty and the mix supply needs replenishing. To prevent damage to the unit, refrigeration discontinues automatically when the mix out indicator lights.

Section 6

Operating Procedures

Following are step-by-step operating procedures for the model 390 slush freezer. This unit has a 20 quart (18.9 liter) mix hopper and the freezing cylinder holds 7 quarts (6.6 liters) of slush product.

We begin our instructions at the point where we enter the store in the morning and find the parts disassembled and laid out to air dry from the previous night's brush cleaning.

These opening procedures will show you how to assemble these parts into the freezer, sanitize them and prime the freezer with the slush base you have selected in preparation to serve your first portion.

If you are disassembling the machine for the first time or need information to get to this starting point in our instructions, turn to "Disassembly" on page 10, and start there.

Assembly



BE SURE THE CONTROL SWITCH IS IN THE "OFF" POSITION. Failure to do so may cause injury from electrocution or hazardous moving parts.

Note: When lubricating parts, use an approved food grade lubricant (example: Taylor Lube).

Step 1

Install beater drive shaft. Slide the o-ring into the first groove on the drive shaft. Lubricate the groove, o-ring, and shaft portion that comes in contact with the bearing on the beater drive shaft. **DO NOT** lubricate the hex end of the drive shaft. Slide the seal over the shaft and groove until it snaps into place. Fill the inside portion of the seal with 1/4" more lubricant and evenly lubricate the flat side of the seal that fits onto the rear shell bearing.

Install the drive shaft into the freezing cylinder, hex end first, and into the rear shell bearing until the seal fits securely over the rear shell bearing. Be certain the drive shaft fits into the drive coupling without binding.

Step 2

Before installing the beater assembly, check the scraper blades for any nicks or signs of wear. If any nicks are present or if the blade is worn, replace both blades. If blades are in good condition, install the scraper blade clip over the scraper blade. Place the rear scraper blade over the rear holding pin (knife edge to the outside). Holding the blade on the beater, turn it over and install the front blade the same way.

Holding the blades in position, insert the beater assembly into the freezing cylinder and slide into position over the drive shaft. Turn the beater slightly to be certain that the beater is properly seated. When in position, the beater will not protrude beyond the front of the freezing cylinder.

Step 3

Install the baffle assembly. Lubricate the o-ring, and install it on the front end of the baffle assembly. Install the guide bearing on the rear end of the baffle assembly.

Install the bearing end of the baffle assembly into the pilot hole in the drive shaft.

Step 4

Assemble the freezer door with the "Ice Buster" (door spout clearing device). To assemble the door with the ice buster, install the o-rings on the draw valve and lubricate. (See illustrations on page 10.)

Insert the draw valve into the door, leaving approximately 1/2" of the valve sticking out the top of the door.

Rotate the draw valve so the flats on the top of the draw valve are perpendicular to the door face (see illustration).

Insert the ice buster through the door spout and into the slot located just above the lower o-ring.

With the ice buster in place, rotate the draw valve to allow installation of the draw handle. This will lock the ice buster in place. Install the draw handle pin, and close the draw valve by moving the handle to the left.

Place the large rubber gasket into the groove on the back side of the freezer door.

Slide the white plastic front bearing onto the bearing hub making certain that the flanged end of the bearing is resting against the freezer door. Do not lubricate the door gasket or front bearing.

Step 5

Install the freezer door. Place the front end of the baffle into the hole in the center of the door. Position the door onto the four studs on the front of the freezing cylinder and push the door into place. Install the four handscrews onto the studs and tighten them equally in a criss-cross pattern to insure the door is snug. **DO NOT** over-tighten the handscrews.

Note: If the freezer door does not go into place easily, position open end of beater assembly in the 11 o'clock position.

Step 6

Rotate the baffle assembly so the hole in the end of the shaft is vertical. Insert the baffle arm between the draw valve spout supports and into the hole in the baffle assembly.

Note: During operation, the baffle arm rests on the spout support.

Step 7

Install the rear drip pan. Slide the long drip pan into the hole in the front panel.

Step 8

Install the front drip tray and the splash shield under the door spout.

Step 9

Lay the hopper gasket and feed tube in the bottom of the mix hopper.

Sanitizing

Step 1

Prepare two gallons (7.6 liters) of an approved 100 PPM chlorine based sanitizing solution (example: Kay-5®). USE WARM WATER AND FOLLOW THE MANUFACTURER'S SPECIFICATIONS.

Step 2

Pour the two gallons (7.6 liters) of sanitizing solution into the hopper and allow it to flow into the freezing cylinder.

Step 3

While the solution is flowing into the freezing cylinder, brush clean the mix hopper, mix inlet hole, feed tube and mix level sensing probes.

Step 4

Place the control switch in the "WASH" position. This will cause the sanitizing solution in the freezing cylinder to be agitated. Allow the solution to agitate for five minutes.

Step 5

Place an empty mix pail beneath the door spout and move the draw handle to the right. Draw off all the sanitizing solution. When the sanitizer stops flowing from the door spout, move the draw handle to the left and place the control switch in the "OFF" position.

Step 6

With sanitized hands, assemble the hopper gasket around the top edge of the mix hopper. Stand the feed tube in the corner of the hopper.

Priming

Step 1

With a mix pail beneath the door spout, move the draw handle to the right. Fill the hopper with FRESH slush product and allow it to flow into the freezing cylinder. This will force out any remaining sanitizing solution. When full strength mix is flowing from the door spout, move the draw handle to the left.

Step 2

When the slush product has stopped bubbling down into the freezing cylinder, install the feed tube in the mix inlet hole.

Step 3

Place the control switch in the "AUTO" position. To begin refrigeration, raise the rod resting on top of the valve handle pin. When the unit cycles off, the product will be at serving viscosity.

Step 4

Place the hopper cover into position.

Closing Procedures

To disassemble the model 390, the following items will be needed:

- Two cleaning pails
- Sanitized stainless steel rerun can with lid
- Necessary brushes (provided with freezer)
- Cleaner
- Single service towels

Draining Product From The Freezing Cylinder

Step 1

Place the control switch in the “OFF” position as far ahead of cleaning time as possible. This will allow frozen product to soften for easier cleaning.

Step 2

Remove the hopper cover, gasket, and feed tube. Take these parts to the sink for cleaning.

Step 3

With a sanitized pail under the door spout, place the control switch in the “WASH” position and move the draw handle to the right. When all the product stops flowing from the door spout, move the draw handle to the left and place the control switch in the “OFF” position. If local health codes permit the use of rerun, empty the rerun into its can. Cover the container and place it in the walk-in cooler.



ALWAYS FOLLOW LOCAL HEALTH CODES.

Rinsing

Step 1

Pour two gallons (7.6 liters) of **cool**, clean water into the mix hopper. With the brushes provided, scrub the mix hopper, mix inlet hole and mix level sensing probes.

Step 2

With a mix pail beneath the door spout, place the control switch in the “WASH” position and move the draw handle to the right. Drain all the rinse water from the freezing cylinder. When the rinse water stops flowing from the door spout, move the draw handle to the left and place the control switch in the “OFF” position.

Repeat this procedure until the rinse water being drawn from the freezing cylinder is **clear**.

Cleaning

Step 1

Prepare two gallons (7.6 liters) of an approved cleaning solution (example: Kay-5®). USE WARM WATER AND FOLLOW THE MANUFACTURER'S SPECIFICATIONS.

Step 2

Pour the two gallons (7.6 liters) of cleaning solution into the hopper and allow it to flow into the freezing cylinder.

Step 3

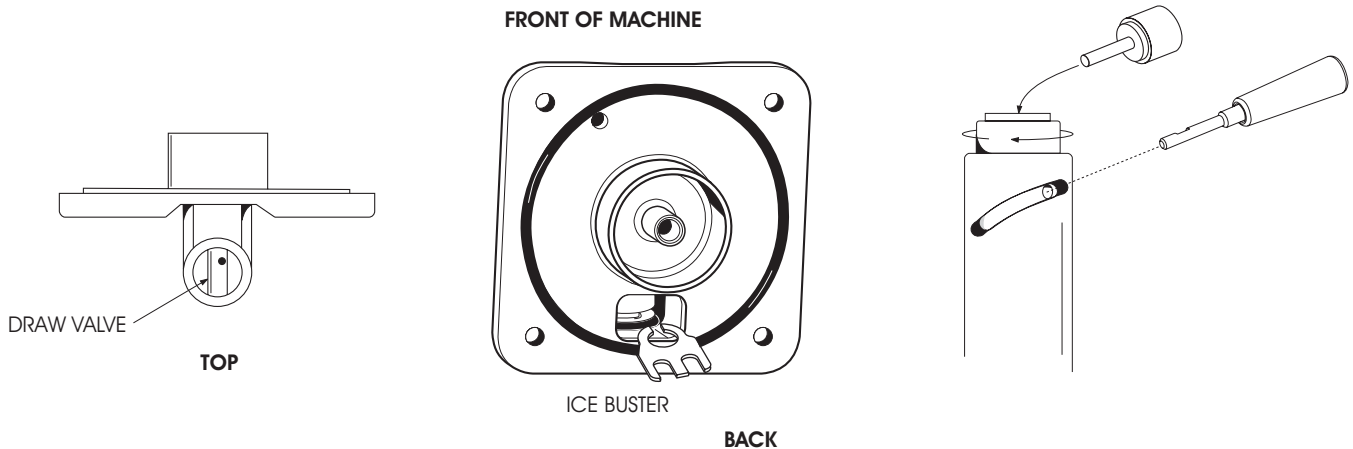
While the solution is flowing into the freezing cylinder, brush clean the mix hopper, mix inlet hole, and mix level sensing probes.

Step 4

Place the control switch in the "WASH" position. This will cause the cleaning solution to be agitated.

Step 5

Place an empty mix pail beneath the door spout and move the draw handle to the right. Draw off all of the cleaning solution. When the solution stops flowing from the door spout, move the draw handle to the left and place the control switch in the "OFF" position.



Disassembly



BE SURE THE CONTROL SWITCH IS IN THE "OFF" POSITION. Failure to do so may cause injury from electrocution or hazardous moving parts.

Step 1

Remove the handscrews, freezer door, baffle assembly, beater assembly, scraper blades, and drive shaft from the freezing cylinder. Take these parts to the sink for cleaning.

Step 2

Remove the front drip tray and splash shield and take them to the sink for cleaning.

Brush Cleaning

Step 1

Prepare a sink with an approved cleaning solution (example: Kay-5®). **USE WARM WATER AND FOLLOW THE MANUFACTURER'S SPECIFICATIONS.** (If another approved cleaner is used, dilute according to label instructions.)

IMPORTANT: Follow label directions, as too **STRONG** of a solution can cause parts damage, while too **MILD** of a solution will not provide adequate cleaning.) Make sure all brushes provided with the freezer are available for brush cleaning.

Step 2

Remove the o-ring and seal from the drive shaft.

Note: To remove o-rings, use a single service towel to grasp the o-ring. Apply pressure in an upward direction until the o-ring pops out of its groove. With the other hand, push the top of the o-ring forward and it will roll out of the groove and can be easily removed. If there is more than one o-ring to be removed, always remove the rear o-ring first. This will allow the o-ring to slide over the forward rings without falling into the open grooves.

Step 3

Remove the draw valve handle and pin, ice buster, draw valve, front bearing and gasket from the freezer door. Remove the scraper blade clips from the scraper blades. Remove the two o-rings from the draw valve, and the o-ring and guide bearing from the baffle assembly.

Step 4

Return to the freezer with a small amount of cleaning solution. Brush clean the rear shell bearing at the back of the freezing cylinder with the black bristle brush.

Step 5

Remove the rear drip pan.

Note: If the drip pan is filled with an excessive amount of mix, it is an indication that the drive shaft o-ring, seal or both should be replaced or properly lubricated.

Step 6

Thoroughly brush clean all disassembled parts in the cleaning solution making sure all lubricant and mix film is removed. Place all the cleaned parts on a clean, dry surface to air dry.

Step 7

Wipe clean all exterior surfaces of the freezer.

Section 7 Important: Operator Checklist

During Cleaning And Sanitizing

Cleaning and sanitizing schedules are governed by your State or local regulatory agencies and must be followed accordingly. The following check points should be stressed during the cleaning and sanitizing operations. **WE RECOMMEND DAILY CLEANING AND SANITIZING.**



ALWAYS FOLLOW LOCAL HEALTH CODES.

Troubleshooting Guide

- ☐ 1. Thoroughly clean and sanitize the machine regularly, including complete disassembly and brush cleaning.
- ☐ 2. Use all brushes supplied for thorough cleaning. The brushes are specially designed to reach all mix passageways.
- ☐ 3. Use the white bristle brush to clean the mix inlet hole which extends from the mix hopper down to the rear of the freezing cylinder.
- ☐ 4. Use the black bristle brush to thoroughly clean the rear shell bearing at the rear of the freezing cylinder. Be sure to have a generous amount of cleaning solution on the brush.
- ☐ 5. Properly prepare the cleaning and sanitizing solutions. Read and follow label directions carefully. Too strong of a solution may damage the parts and too weak of a solution will not do an adequate job of cleaning or sanitizing.
- ☐ 6. Using a screwdriver and cloth towel, keep the female hex drive socket and rear shell bearing clean and free of lubricant and mix deposits.
- ☐ 7. IF LOCAL HEALTH CODES PERMIT THE USE OF RERUN, make sure the rerun is stored in a sanitized, covered stainless steel container and used the following day. Discard all rerun once a week.

Regular Maintenance Checks

- ☐ 1. Rotate scraper blades to allow both sides of the knife edge to wear evenly. This will contribute to self-sharpening and help maintain fast efficient freezing.
- ☐ 2. Replace scraper blades that are nicked or damaged.
- ☐ 3. Before installing the beater, be certain that scraper blades are properly attached over the beater pins.
- ☐ 4. Dispose of o-rings or seals that are worn, torn or fit too loosely and replace with new ones.
- ☐ 5. Follow all lubrication procedures as outlined in the "Assembly" instructions of this manual.
- ☐ 6. Check rear shell bearing for signs of wear (excessive mix leakage in rear drip pan) and be certain it is properly cleaned.
- ☐ 7. Check the condenser for accumulation of dirt and lint. Dirty condensers will reduce the efficiency and capacity of the machine. Condensers should be cleaned monthly with a soft brush. Never use screwdrivers or other metal probes to clean between the fins.
- ☐ 8. If your machine is water cooled, check the water lines for kinks or leaks. Kinks can occur when the machine is moved back and forth for cleaning or maintenance purposes. Deteriorated or cracked water lines should be replaced only by an authorized Taylor mechanic.

Winter Storage

If the place of business is to be closed during the winter months, it is important to protect the freezer by following certain precautions, particularly if the building is to be left unheated and subject to freezing conditions.

Disconnect the freezer from the main power source to prevent possible electrical damage.

On water cooled freezers, disconnect the water supply. Relieve pressure on spring in water valve. Use air pressure on the outlet side to blow out any remaining water in the condenser, and then add a liberal amount of permanent type auto anti-freeze.

This is extremely important. Failure to follow this procedure may cause severe and costly damage to the refrigeration system.

Wrap detachable parts of the freezer such as beater and blades, drive shaft, baffle and freezer door, and place in a protected dry place. Rubber trim parts and gaskets can be protected by wrapping with moisture-proof paper. All parts should be thoroughly cleaned of dried mix or lubrication accumulations which attract mice and other vermin.

Your local Taylor Distributor can perform this service for you.

Section 8

Troubleshooting Guide

PROBLEM	PROBABLE CAUSE	REMEDY	PAGE REF.
1. No product being dispensed with draw valve opened.	a. Improper mixing of product.	a. Carefully follow directions for mixing product.	--
	b. Mix low condition.	b. Add mix to mix hopper.	6
2. Product too thin.	a. Improper mixing of product.	a. Carefully follow directions for mixing product.	--
	b. Missing, incorrectly installed or bad scraper blades.	b. Replace or install correctly.	7
	c. Consistency control needs adjusting.	c. Contact a service technician.	--
3. Product too stiff.	a. Consistency control knob needs adjusting.	a. Contact a service technician.	--
	b. Improper mixing of product.	b. Carefully follow directions for mixing product.	--
	c. Insufficient product in the freezing cylinder.	c. Keep hopper full of mix.	6
4. Scored walls of freezing cylinder.	a. Broken beater pins.	a. Repair or replace beater assembly.	--
	b. Gear unit out of alignment.	b. Contact a service technician.	--
	c. Bent beater assembly.	c. Repair or replace.	--
	d. Missing front bearing.	d. Replace or install front bearing.	7
5. Unable to remove drive shaft.	a. Lubrication on hex end of drive shaft.	a. Do not lubricate the hex end. Contact service technician for removal.	7
	b. Rounded corners of the drive shaft, drive coupling or both.	b. Replace drive shaft, drive coupling or both.	--
6. Excessive mix leakage in rear drip pan.	a. Improper or inadequate lubrication on drive shaft o-ring or seal on drive shaft.	a. Use an approved food grade lubricant (example: Taylor Lube) and follow lubrication procedures.	7
	b. Bad or missing o-ring or seal on drive shaft.	b. Replace rubber parts every 3 months.	16
	c. Worn rear shell bearing.	c. Contact a service technician for replacement.	--

PROBLEM	PROBABLE CAUSE	REMEDY	PAGE REF.
7. No freezer operation with unit in the "AUTO" position.	a. Unit unplugged.	a. Plug cord in wall receptacle.	--
	b. Beater motor has tripped the internal overload.	b. Place control switch in the "OFF" position. Allow the motor to cool, then resume normal operation. Contact a service technician if problem continues.	--
	c. Tripped circuit breaker or blown fuse.	c. Reset circuit breaker or replace blown fuse.	--
	d. The rod resting on top of the valve handle pin must be raised to activate refrigeration.	d. Raise and release the lever.	8
8. Unit not freezing product when in the "AUTO" position.	a. Refrigerant leak.	a. Call for service to repair leak.	--
	b. Dirty condensers.	b. Clean regularly.	12
9. Missing guide bearing.	a. Guide bearing stuck in drive shaft.	a. Remove guide bearing from hole in drive shaft.	--
10. Excessive leakage from the door spout.	a. Improper or inadequate lubrication on draw valve o-rings.	a. Use an approved food grade lubricant (example: Taylor Lube) and follow lubrication procedures.	7
	b. Bad or missing o-rings on draw valve.	b. Replace rubber parts every three months.	16
11. Door will not go into position easily.	a. Position of beater assembly.	a. The open end of the beater assembly should be in the 11 o'clock position.	8

Section 9 Parts Replacement Schedule

PART DESCRIPTION	EVERY 3 MONTHS	EVERY 6 MONTHS	ANNUALLY
Drive Shaft O-ring	X		
Drive Shaft Seal	X		
Scraper Blade	Inspect & Replace if Necessary	Minimum	
Baffle O-ring	X		
Guide Bearing	X		
Freezer Door Gasket	X		
Front Bearing	X		
Draw Valve O-ring	X		
Black Bristle Brush, 1" x 2"		Inspect & Replace if Necessary	Minimum
Double Ended Brush		Inspect & Replace if Necessary	Minimum
White Bristle Brush, 1" x 2"		Inspect & Replace if Necessary	Minimum
White Bristle Brush, 3" x 7"		Inspect & Replace if Necessary	Minimum

Refer to Parts List on the next page when ordering above parts.

Section 10

Parts List

Copeland Compressor - J8086700/Up (Update 134)

DESCRIPTION	PART NUMBER	QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
ARM-BAFFLE *390*	047729	1	103	J4040000/UP	83
BAFFLE ASSEMBLY	X47731	1	103	J4040000/UP	83
+O-RING-.291 ID X .080W	018550	1	000		
BEARING-FRONT	013116	1	000		
BEARING-GUIDE	014496	1	000	J4040000/UP	83
BEARING-REAR SHELL *PLASTIC*	032511	1	000		
+ WASHER-BEARING LOCK	012864	1	000		
+ O-RING-1-1/16 OD X .070 WALL	018432	1	000		
+ NUT-BRASS BEARING	028991	1	000		
+ GUIDE-DRIP SEAL	028992	1	000		
BEARING-UNIT-REAR 1 PULLEY		1	103	SEE KIT A.-REAR BEARING UNIT	129
BEATER A.-7QT-1 PIN-SUPPORT	X46233	1	103		
+ BLADE-SCRAPER-PLASTIC 9-13/16L	046237	2	000		
+ CLIP-SCRAPER BLADE	046238	2	103		
PIN-SCRAPER BLADE	009839	2	000		
BELT -POLY V-525J10	047728	1	000	J4040000/UP	83
BLOCK-TERMINAL 2P	039422	1	103		
BRUSH-DOUBLE ENDED-PUMP&FEED T	013072	1	000		
BRUSH-DRAW VALVE 1"ODX2"X17"L	013073	1	000		
BRUSH-MIX PUMP BODY-3"X7"WHITE	023316	1	000		
BRUSH-REAR BRG 1IN.DX2IN.LGX14	013071	1	000		
COMPRESSOR-RS80C1E-CAV (NEW)	051958-	1	512	COPELAND - J8086700/UP	134
+ CAPACITOR-RUN	012906	1	103	230-60-1	
+ CAPACITOR-START	033044-1	1	103	230-60-1	
+ RELAY-START-COMPRESSOR	051957-27	1	103	230-60-1	
COMPRESSOR-M50B103BBCB (OLD)	047065-	1	512	BRISTOL - PRIOR TO J8086700	134
+ CAPACITOR-RUN- 15UF/370V	047070	1	103	230-60-1	
+ CAPACITOR-START-124-149UF/250V	047069	1	103	230-60-1	
+ RELAY-START-COMPRESSOR	047067	1	103	230-60-1	
COMPRESSOR-RS80C1E-TF5-224 (NEW)	051958-33	1	512	3 PHASE - COPELAND - J8086700/UP	134
COMPRESSOR-L51B562DBLB (OLD)	048343-33	1	512	3 PH. - BRISTOL - PRIOR TO J8086700	

+ Available Separately

DESCRIPTION	PART NUMBER	QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
CONDENSER-AC-15LX14HX2.59T-3RW	046558	1	103		
COUPLING A.-TORQUE-SHAKE-HEX	X48316	1	103		
COUPLING-TORQUE-DRIVE	046866	1	103		
COUPLING-TORQUE-LOAD-HEX	039397	1	103		
PIN-COUPLING-TORQUE	039453	3	103		
SCREW-5/16-18 X 3/8 ALLEN SET	025376	2	000		
SCREW-SHOULDER 3/16D X 1/2L-SS	039455	3	000		
SPRING-3/8 ODX3/16 IDXIL-BLUE	039987	3	103		
COVER A.-HOPPER-STD	X38458	1	103		
+ KNOB-MIX COVER	025429	1	103		
DECAL-CLEAN INST.-HOPPER	019029	1	000		
DECAL-DEC-TAYLOR-380	045452	1	000		
DECAL-TROUBLESHOOTING	038374	1	000		
DECAL-WASH-OFF-AUTO	014502	1	000		
DEFLECTOR-AIR	048549	1	103	SINGLE PHASE & THREE PHASE	135
DIAGRAM-WIRING *390*	047730-	1	000	J4040000/UP	83
DOOR A.-PARTIAL *340-350-450*	X39248	1	103		
+ BUSTER-ICE *390*	047735	1	103	J4040000/UP	83
+ GASKET-DOOR 5.109"ID X 5.630OD	014030	1	000		
+ HANDLE A.-DRAW-SLUSH-BLACK	X47384	1	103		
+ O-RING-1"OD X .139W	032504	2	000	DRAW VALVE	
+ VALVE A.-HANDLE PIN	X25929	1	103		
+ VALVE-DRAW *390*	047734	1	103	J4040000/UP	83
DRYER-FILTER 3/8 X 1/4 SOLDER (NEW)	048901	1	000	J8086700/UP	134
DRYER-FILTER 3/8 X 1/4 SOLDER (OLD)	045866	1	000	PRIOR TO J8086700	
GASKET-HOPPER COVER-20 QT-SGL	038375	1	000		
GUIDE A.-DRIP PAN *340*341*390	X47190	1	103		
HOOD *390*	021222-SP4	1	103		
KIT A.-REAR BEARING UNIT	X39162-SER	1	103	INCLUDES RETAINING PLATE	129
KIT A.-TUNE UP	X39969	1	000		
BEARING-FRONT	013116	1	000		
BEARING-GUIDE	014496	1	000		
GASKET-DOOR 5.109"ID X 5.630OD	014030	1	000		

+ Available Separately

DESCRIPTION	PART NUMBER	QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
O-RING-.291 ID X .080W	018550	1	000	BAFFLE ASSEMBLY	
O-RING-7/8 OD X .139W	025307	1	000	DRIVE SHAFT	
O-RING-1"OD X .139W	032504	2	000	DRAW VALVE	
SEAL-DRIVE SHAFT	032560	1	000	DRIVE SHAFT	
TOOL-O-RING REMOVAL	048260-WHT	1	000		
LABEL-DOOR-WARN-MOVE PARTS	032749	1	000		
LABEL-WARN-COVER	051433	5	000		
LEG-4" SS-WORING	013458	4	103		
LIGHT-ADD MIX-AMBER-RECTANGULR	047141-	1	103		
LIGHT-MIX OUT-AMBER-RECTANGULAR (NEW)	050036-	1	103	J8086700/UP	135
LIGHT-MIX OUT-RED-RECTANGULAR (OLD)	047142-	1	103	PRIOR TO J8086700	
LINE A -LIQUID *390*	X47012	1	103	CAPILLARY TUBE-HOPPER	
LUBRICANT-SUPER TAYLOR	047518	1	000		
LOUVER-SIDE - LEFT (NEW)	013631	1	103	J8086700/UP (1 LOUVER ONLY - L/S)	134
LOUVER-SIDE (OLD)	013631	2	103	PRIOR TO J8086700 (2 LOUVER - LEFT/RIGHT SIDE)	134
+ SCREW-10-32X3/8 RHM-ZP	002742	8	000		
+ NUT-10-32 HEX	005598	8	000		
MAN-OPER 390	048693-M	1	000	J5026018/UP	90
MOTOR-1/2 HP	024839-	1	212	BEATER	
MOTOR-FAN 80W 208/230V 60HZ (NEW)	051744-27	1	212	J8086700/UP	134
+ FAN-5 BLADE 12" PUSH	047279	1	212	J8086700/UP	134
+ CAPACITOR-RUN (FAN MOTOR)	051785	1	103	J8086700/UP	134
+ BOOT-CAPACITOR	031314	1	000	J8086700/UP	134
MOTOR-FAN 50 WATT (OLD)	029770-	1	103	PRIOR TO J8086700	
+ FAN-5 BLADE 12" PUSH 22DEG CCW	049009	1	103	PRIOR TO J8086700	116
NUT-STUD *340-342-344-350-450*	029880	4	103	HANDSCREWS	
PAIL-6 QT.	023348	1	000		
PAN-DRIP 19-1/2 LONG	035034	1	103		
PANEL A.-FRONT *390*	X47004	1	103		
PANEL-SIDE *390*LEFT	047006	1	103		
+ SCREW-1/4-20X3/8 RHM-STNLS	011694	3	000		
+ WASHER-PLASTIC PIVOT	013808	2	000		

+ Available Separately

020624

DESCRIPTION	PART NUMBER	QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
PANEL-SIDE *390*RIGHT	047007	1	103		
+ WASHER-PLASTIC PIVOT	013808	2	000		
+ SCREW-1/4-20X3/8 RHM-STNLS	011694	3	000		
PANEL-SIDE UPPER RIGHT (NEW)	042317	1	103	J8086700/UP (1 PHASE & 3 PHASE)	134
PANEL-SIDE UPPER RIGHT	042317	1	103	PRIOR TO J8086700 - 3 PHASE - (OMIT 1-013631 LOUVER)	
PANEL-REAR *390*	047008	1	103		
+ BUSHING-PANEL	013289	2	000		
+ SCREW-8 X 3/8 RD HD TYP B	013234	2	000		
PCB A-CONTROL (NEW)	X51393-SER	1	212	REPLACES X47774-SER (J9010000/UP)	138
PCB A-EVC2 (NEW)	X50645-SER	1	212	J9010000/UP	138
CHIP-SOFTWARE - REV 1.01 (NEW)	X40869	1	103	J9010000/UP	138
CHIP-SOFTWARE *390*EVC*32K (OLD)	X40852	1	103	FOR OLD STYLE PCB A.-EVC - X47774-SER	138
PCB A-EVC/SHAKE (OLD)	X47917-SER	1	212	BASE BOARD - FOR OLD STYLE PCB A.-EVC X47774-SER	138
PCB A-DUAL MIX LVL/CONT. FILL	X41420-SER	1	103		
PLATE-DEC-340-341	043456	1	103		
PROBE A-MIX LOW	X44439	1	103		
+ DISC-PROBE *SQ HOLE*	030965	1	103		
+ SPACER-PROBE *SQ HOLE*	030966	1	103		
PROBE A-MIX OUT-SQUARE HOLE	X41348	1	103		
O-RING-1/2OD X .070W	024278	2	000		
SPACER-PROBE-SQUARE HOLE-7/8	041346	1	103		
SPACER-PROBE-ROUND HOLE-5/8DIA	041347	1	103		
PULLEY-10J- 1.125PD-5/8BORE	028857	1	103	MOTOR J4040000/UP	83
PULLEY-10J-12"PD-5/8BORE	025480	1	103	BEARING UNIT J4040000/UP	83
RELAY-3 POLE-20A-208/240 50/60	012725-	1	103		
RELAY-DPDT-20 A-24VAC	026581-03	1	103		
SANITIZER KAY-5 25 PACKETS	041082	1	000		
SENSOR A.-EVC-SLUSH-15"	X44354	1	103		
+ BRACKET-SWITCH-PROXIMITY-LEFT	039648	1	103		
SHAFT-BEATER	036412	1	103		

+ Available Separately

020624

DESCRIPTION	PART NUMBER	QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
+ O-RING-7/8 OD X .139W	025307	1	000		
+ SEAL-DRIVE SHAFT	032560	1	000		
SHELL A.-INSULATED *390*	X46984	1	512		
+ STUD-NOSE CONE-5/16-18X5/16-18	013496	4	103		
SHIELD-SPLASH-WIRE 13-11/16L	046177	1	103	J4040000/UP	83
SHROUD-FAN *453*	039023	1	103		
SWITCH A.-DRAW *340*EVC	X44223	1	103		
ARM A.-DRAW VALVE *340*EVC	X44224	1	103		
BRACKET A.-SWITCH *321-751*	X43722	1	103		
E-RING	049178	1	000		
PIN-PIVOT	015478	1	103		
SPRING-RETURN R.	023488	1	103		
SWITCH-LEVER-SPDT-15A-125-277V	048394	1	103		
SWITCH-PRESSURE 405 PSI	052663	1	103	REPLACES 048230	135
SWITCH-TOGGLE-DPDT*ON-OFF-ON	014464	1	103		
TRANS.-240V PR1/24V SEC 10 VA	030132-	1	103		
TRAY-DRIP 14.8	046275	1	103	J4040000/UP	83
TRIM-CORNER *390*LEFT	047002	1	103		
TRIM-CORNER *390*RIGHT	047003	1	103		
TRIM-FRONT *390*	047001	1	103		
TUBE-FEED-3/8 HOLE	015176-9	1	103		
VALVE-ACCESS 1/4FL X 1/4SOLDER	044404	1	103		
VALVE-ACCESS 1/4FL X 3/8SDR-90	044455	1	103		
VALVE-ACCESS-1/4 MFLX1/4 S-90	047016	1	103	DISCHARGE LINE	
VALVE-EPR 1/4S	022665	1	103		
VALVE-EXP-AUTO-1/4S X1/4 FPT	046365	1	103		
+ BOOT-EXPANSION VALVE	027137	1	000		

+ Available Separately

DESCRIPTION	PART NUMBER	QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
WATER COOLED					
CONDENSER-WC-SPIRAL	049309	1	103		
MOTOR-FAN 9 WATT	012768-27	1	103		
FAN-5 BLADE	016289	1	103		
SWITCH-PRESSURE	048231	1	103		
VALVE-WATER	046686	1	103		
50 HZ - J8086700/UP					
COMPRESSOR RS80C1E-CAZ-224	051958-40	1	512	230-50-1	
+ CAPACITOR-RUN	023606	1	103	230-50-1	
+ CAPACITOR-START	051960	1	103	230-50-1	
+ RELAY-COMPRESSOR START	051957-40	1	103	230-50-1	
MOTOR-FAN 100W 220-240 50HZ	047178-34	1	103		
+ CAPACITOR-RUN	019624	1	103		
+ BOOT-RUN CAPACITOR	031314	1	000		
PULLEY 10J - 1.25PD-5/8 BORE	033141	1	103	BEATER MOTOR	
PANEL MOUNT SPINNER OPTION:					
SPINNER A.-PANEL W/FILTER	X48444-27	1	103		
PANEL A.-FRONT	X47004-SP	1	103	PANEL W/HOLES FOR SPINNER MOUNT	
COSTCO - W/PRIME PLUG					
CAP-RESTRICTOR - 5/8 ID	053100	1	000	FOR DOOR SPOUT - 3 SHIPPED W/ACCESSORIES	140
DOOR A.-FREEZER	X50990	1	103		
+ VALVE-DRAW	047734	1	103		
+ O-RING-DRAW VALVE	032504	2	000		
+ HANDLE A.-DRAW	X47384	1	103		
+ VALVE A.-HANDLE PIN	X25929	1	103		
+ BUSTER-ICE	047735	1	103		
+ PLUG-PRIME	050405	1	103	STAINLESS	
+ O-RING-PRIME PLUG	043758	1	000		
KIT A.-TUNE UP	X50413	1	000		
BEARING-FRONT	013116	1	000		
GASKET-DOOR	014030	1	000		

+ Available Separately

DESCRIPTION	PART NUMBER	QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
BEARING-GUIDE	014496	1	000		
O-RING .291 ID X .080W	018550	1	000	BAFFLE ASSEMBLY	
O-RING-7/8 OD X .139W	025307	1	000	DRIVE SHAFT	
O-RING-1" OD X .139W	032504	2	000	DRAW VALVE	
SEAL-DRIVE SHAFT	032560	1	000	DRIVE SHAFT	
O-RING-.563 OD X .070W	043758	1	000	PRIME PLUG	
TOOL-O-RING REMOVAL	048260-WHT	1	000		
TUBE-FEED-5/16 HOLE	053062	1	103	REPLACES 015176-9 - J9050000/UP	140

+ Available Separately

Section 11

Wiring Diagrams

